

streamlining in order to reduce the creation of turbulence through eddy currents on both the leading and trailing zones of the arm 2 17 in the contents of the clarifier body 1 16.

In order to conserve the heat of the juice in the clarifier, the body 1 16 may be insulated and covered with a circular roof covering with suitable cut outs for ancillary equipment and inspection ports.

SUMMARY

39. In summary, the Applicant believes that the clarification apparatus in accordance with the invention provides a more efficient and less expensive sugar juice clarifier than currently available for the purpose of raw mixed sugar juice clarification (purification) through settlement of the precipitate and mud in a turbulent-free hydraulic environment.

40. I claim:

1. (Canceled)
2. (Canceled)
3. (Canceled)
4. (Canceled)
5. (Canceled)
6. (New): A sugar juice clarification apparatus comprising:

a cylindrical clarification tank having a center;

an externally driven rotating arm and hub assembly comprising a central rotating hub attached to a rotating arm, the hub and arm assembly rotating about the center of the cylindrical clarification tank;

the rotating arm comprising an upper compartment with a leading top edge, a middle compartment with a trailing vertical face, and a lower compartment with a leading bottom edge;

the upper compartment having a series of adjustable slots on the leading top edge of the upper compartment;

the middle compartment having a series of adjustable slots on the bottom portion of the trailing vertical face of the middle compartment;

the lower compartment having a series of adjustable slots on the leading bottom edge of the lower compartment;

the rotating hub comprising three concentric annular compartments, each connected to its relative compartment in the rotating arm by means of ducts;

a means of removing the contents of the upper and lower compartments of the rotating arm assembly via the relative compartments of the central concentric smaller diameter tanks;

a means of introducing unclarified juice into the middle compartment of the rotating arm assembly via the respective concentric tank in the hub.

7. (New): A sugar juice clarification apparatus comprising:

a cylindrical clarification tank having a center with centrally positioned, concentric smaller diameter tanks;

an externally driven rotating arm assembly rotating about the center of the cylindrical clarification tank, in the annular portion of the clarification tank between the outer circumference of the clarification tank and the outer circumference of the inner concentric smaller diameter tanks;

the rotating arm comprising an upper compartment with a leading top edge, a middle compartment with a trailing vertical face, and a lower compartment with a leading bottom edge;

the upper compartment having a series of adjustable slots on the leading top edge of the upper compartment;

the middle compartment having a series of adjustable slots on the bottom portion of the trailing vertical face of the middle compartment;

the lower compartment having a series of adjustable slots on the leading bottom edge of the lower compartment;

a means of siphoning the contents of the upper and lower compartments of the rotating arm assembly into the relative compartments of the central concentric smaller diameter tanks;

a means of introducing unclarified juice into the middle compartment of the rotating arm assembly through a pipe manifold through the centrally positioned support bearing for the pivotal support of the rotating arm assembly.